

DETAILED ACTION

1. This office action is responsive to communication filed on February 7, 2008.

Response to Arguments

2. Applicant's arguments, see pages 5-10, filed February 7, 2008, with respect to claim 1 have been fully considered and are persuasive. The rejection of claims 1 and 2 under 35 U.S.C. 103(a) has been withdrawn.
3. Any objections made to the claims by the Examiner are hereby removed in view of Applicant's response.

Election/Restrictions

4. Applicant's election of claims 1 and 2 in a phone conversation initiated by the Examiner on May 9, 2008 is acknowledged.

EXAMINER'S AMENDMENT

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Nancy R. Simon (Reg. 36,930) on May 9, 2008.

6. The claims are amended as follows:

3. (Cancelled)
4. (Cancelled)

5. (Cancelled)
6. (Cancelled)

Allowable Subject Matter

7. Claims 1 and 2 are allowed.

The following is an examiner's statement of reasons for allowance:

Consider claim 1, the closest prior art of reference, Shinohara (US 2003/0189656) teaches:

An image sensor (figures 7 and 8B) comprising:
at least first (pixel A) and second (pixel B) photosensitive regions (See paragraphs 0047-0054. There are two photodiode regions for pixels A and B.);
a color filter array (filters, 41, 42) having at least two different colors that selectively absorb specific bands of wavelengths of light (See figure 8B, paragraph 0054. Green and magenta filters are used.), and the two colors respectively span portions of predetermined photosensitive regions (See figure 7, paragraph 0047. The first filter portion (41) spans pixel A and the second filter portion (42) spans pixel B.);
and

wherein the at least first and second photosensitive regions (Pixel A and Pixel B) are doped so that charge is collected and stored in two separate depth regions of the photosensitive regions (Numerals 33, 34, 35 and 36 indicate the separate depth regions for collecting charge. These are detailed in paragraphs 0041, 0043 and 0053.);

However, the prior art of record does not explicitly teach nor reasonably suggest at least two charge-coupled devices adjacent the first photosensitive region, and a first transfer gate associated with the first photosensitive region that selectively passes charge to the at least two charge-coupled devices at first and second voltage levels which, when energized at the first voltage level, causes the charge stored in one depth region to be passed to one of the at least two charge-coupled devices, and when the transfer gate is energized at the second voltage level, causes the charge stored in the other depth region to be passed to one of the at least two charge-coupled devices.

Claim 2 is allowed as being dependent upon claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALBERT H. CUTLER whose telephone number is (571)270-1460. The examiner can normally be reached on Mon-Thu (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan V Ho can be reached on (571)-272-7365. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan V Ho/
Primary Examiner, Art Unit 2622

AC